Notes 9/18 - Simplifying Expressions

Like terms - have the same variables to the same powers

Ex: Are the following like terms?

$3x^2, x^2$ — yes

$8x^2, 8x$ — no

x^2y, xy^2 — no

- Be careful when subtracting a quantity → distribute the negative

Ex: $(3x^2+2x-5) - 1(x^2+3x-4)$

$3x^2+2x-5-x^2-3x+4$

$$\boxed{2x^2-x-1}$$

- When adding fractions, make sure you have (or make if you need to) a common denominator.

Ex: $\frac{c}{7} + \frac{3c}{7} = \frac{4c}{7}$

Ex: $\frac{3(x+1)}{3\cdot 2} + \frac{2\cdot x}{2\cdot 3} = \frac{3(x+1)}{6} + \frac{2x}{6}$

$= \frac{3x+3}{6} + \frac{2x}{6} = \boxed{\frac{5x+3}{6}}$

- When distributing a variable

Ex: $3a(2a^2+4b)$

$= 6a^3 + 12ab$